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NOTTINGHAM  
TRENT UNIVERSITY 

# **ABLE Project**

## **2015-1-UK01-KA203-013767**

**Output O8: Institutional Case Studies**  
**Nottingham Trent University – Staff survey**



Funded by the  
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# Output O8: Institutional Case Studies

## Nottingham Trent University – Staff survey

The three partner institutions start this project in different national contexts with differing sets of priorities. Importantly they start the projects with different levels of experience in the use of learning analytics.

Therefore, we will write three project case studies describing the work conducted. These will be written to aid our own reflection, but also to guide other institutions interested in utilizing learning analytics to support their students.

We will agree a common structure to help readers learn quickly the lessons from each case study.

*"The European Commission support for the production of this publication does not constitute an endorsement of the contents which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein."*

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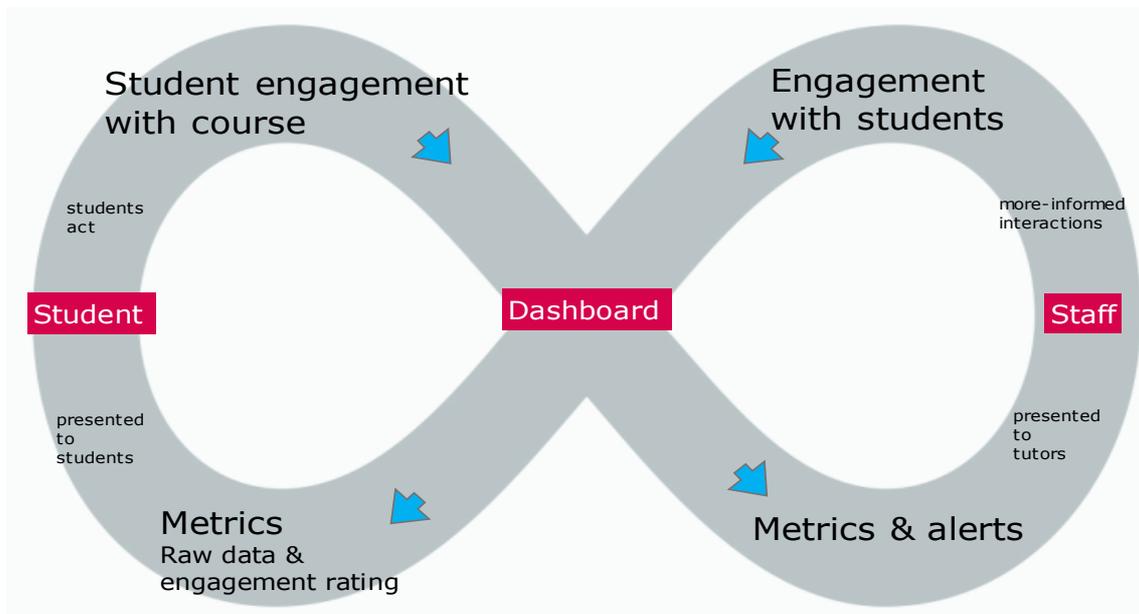
## 1. Project Definition

NTU's learning analytics (LA) tool, the NTU Student Dashboard, has been designed to achieve four key aims:

1. Promote student success
2. Improve student-staff working relationships
3. Support students to manage their own learning
4. Improve institutional data systems

The iPad trial itself focused specifically on helping to achieve the second of these four key aims, by providing staff with tools to enhance tutorial sessions and to encourage staff to make full use of the Student Dashboard during these key sessions. This is part of the wider understanding that the Dashboard is an enabler for its users and facilitates change for two distinct change agents; staff and students, rather than being an outcome in its own right. This concept is illustrated in **figure 1** below. The Dashboard has been designed so that the main staff user is the personal tutor.

Figure 1: Embedding the NTU Student Dashboard into the institutional ecosystem:



It is recognised that there are a number of barriers experienced by personal tutors in providing effective tutorials. These barriers include access to information about the students, as well as time and physical space to meet the students. The study set out to understand whether or not giving staff iPads would improve the use of the Dashboard, and the capacity for staff to deliver effective tutorials for students.

The measures of success for this case study were based on the design and distribution of three user surveys to be completed at various points throughout the trial. These surveys aimed to assess staff experience of using the iPad and Dashboard during tutorials, illustrate more specifically the process of using the iPads in this setting, and allow for staff to give their feedback with regards to how learning analytics is used within the Dashboard.

## 2. Description of Work Undertaken

200 iPads were allocated to staff in 8 of the 9 schools at NTU<sup>1</sup>, during the autumn term 2016. The iPads were intended to be used by staff responsible for 1-1 tutorials, to enable them to meet students and provide tutorials more flexibly. The iPads were initially allocated in proportion to the total number of staff users on the Dashboard access list, however distribution varied between Schools in practice. NTU's Information Systems (IS) team produced a bespoke user guide for those participating in the trial, helping staff to make full use of the tool, and to encourage usage from the start of the year. This user guide was also evaluated within this case study, as part of the survey questions.

The trial took place over one full academic year, with surveys analysing the impact being conducted at key points throughout the year. This allowed for the change in practice to become embedded, whilst the impact of the change was monitored. The Student Engagement team distributed the surveys and subsequently analysed the survey results in order to find key themes within the feedback received.

The timeframes and details of each of the surveys are as follows:

	Timeframe	Respondents	Focus
<b>Survey 1</b>	Dec 2016 - Jan 2017	126 staff members	Staff experience of using the iPad, ease of using the Dashboard on it, and whether or not using the iPad in a tutorial had been beneficial. A full list of the questions used in this survey can be found in <i>Appendix A</i>
<b>Survey 2</b>	March – April 2017	137 staff members	To better understand the nature of how staff carried out tutorials with students, and how they used the Dashboard in those tutorials. A full list of the questions used in this survey can be found in <i>Appendix B</i> .
<b>Survey 3</b>	June 2017	130 staff members	This survey asked further questions about the role of the Dashboard in tutorials, and more broadly about barriers to effective personal tutorials. A full list of the questions used in this survey can be found in <i>Appendix C</i> .

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<sup>1</sup> The 9<sup>th</sup> school had already distributed tablets independently from our trial.

### 3. Evaluation and Results

The three surveys conducted included a mixture of open and closed questions, and the answers received for each of these questions were analysed and themed. The results are broken down by survey below, highlighting the key findings of the trial throughout.

#### 3.1 Survey 1

The vast majority of staff who responded reported that the iPad was easy to use (94% responded 'very easy' or 'easy'), however at this point just over one third had already struggled on at least one occasion. Some of these issues related to initial set up of the iPad, or 'scaling' issues<sup>2</sup> with the Dashboard itself on a mobile device. Almost three quarters found the user guide produced by IS to be either 'useful' or 'very useful'. 85% of participants had accessed the Dashboard using the iPad, and the Dashboard itself scored highly regarding ease of use.

Feedback with regards to the overall experience was generally positive, with comments focusing on the design of the Dashboard, and the iPad itself providing access.

*"...it's great as many of my tutorials are not in my office so having a portable device to record them through Dashboard is excellent."*

Almost three quarters of participants used the Dashboard in a 1-1 tutorial, at the time the survey was completed. The most common reasons for not having used the iPad related to timing, for example tutorials not taking place until the second term. Through this survey, 65% of staff reported that using the iPad during the tutorials had influenced the students' behaviour, with a variety of reasons given primarily relating to accessing different areas of functionality of the Dashboard itself.

*"It ensures transparency and shows a clear record of both parties' conversation. And it is a permanent record, which is a good thing."*

Concerns were raised regarding the implications for students about being monitored by staff, and that this change will only impact already engaged students.

*"...it is generally the engaged students attending these tutorials, whereas the disengaged students would benefit most from such dashboard orientated discussions..."*

Staff were asked three open-ended questions regarding improvements to the Dashboard, use of the iPad, and any further comments or suggestions. These comments were subsequently analysed, with several key themes being revealed. Some staff felt that Dashboard data was inaccurate or out of date, and that further data such as attendance and previous grades should be made available (it should be noted that these have since been included within subsequent versions of the Dashboard). Staff also suggested changes to who can access and use the information, which staff can obtain

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<sup>2</sup> The scaling issues predominantly describe how parts of a graph or column were not visible when the iPad was held in portrait, causing confusion for the user.

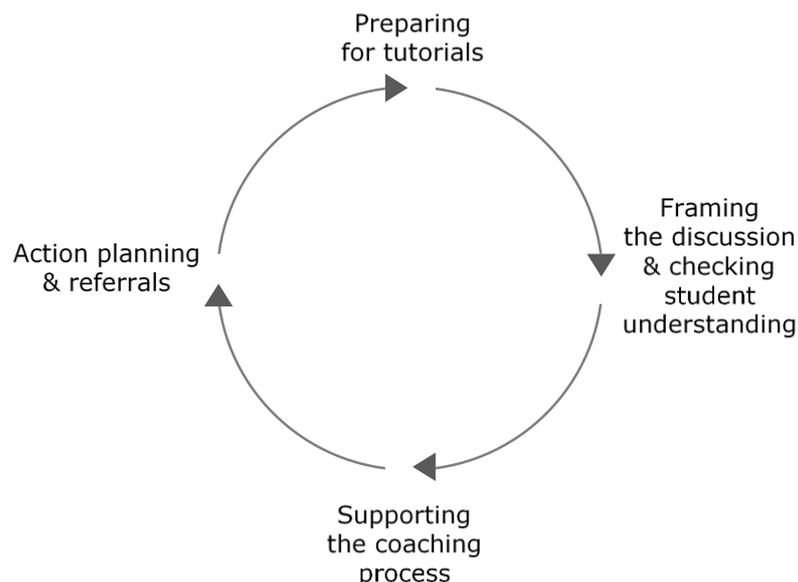
access, and that staff should be allowed to upload information to an individual student's Dashboard that only they can view.

### 3.2 Survey 2

The primary focus of the second survey was to better understand how staff carried out tutorials with students, and how they used the Dashboard in this setting. The majority of staff (72%) delivered 1-1 tutorials with their students, typically holding these 2 to 3 times per academic year. Some variation of length and frequency of tutorials exists between Schools however due to low sample size, this finding is far from conclusive. Several topics were covered during the tutorial, with 'Academic Progress' being the most frequently occurring topic, along with 'programme expectations', 'personal issues', and the need for further support.

Staff were asked to describe how they used the Dashboard during the tutorials, with two primary ways being found; 'taking an overview of their tutees' and 'supporting the tutorial cycle'. The vast majority of responses related to the later point, and the four stages of the 'tutorial cycle' are illustrated in **figure 2**, below.

Figure 2: The Tutorial Cycle - How staff use the Dashboard as part of the tutorial process:



Participants responded that they had used the Dashboard at each of the four steps of the tutorial process, with comments relating to each point specifically. Firstly, in preparing for tutorials, tutors used the Dashboard to give some contextual personal information about the student they were about to see, to help the focus specifically on that individual.

*"Before I see the student, I check their personal details & photo & look at their attendance and engagement levels."*

Secondly, in framing the discussion, tutors commented that Dashboard information, such as the engagement graphs, helped to form part of the discussion at the start of session.

Of particular use was how the Dashboard contextualised the individual students' engagement in relation to the wider student cohort, which in turn helped to challenge some students' self-perceptions.

Thirdly, tutors described how they used the Dashboard to support the coaching process, often as a prompt for how the student might engage further with specific resources.

Finally, some participants described how the Dashboard is useful not only in action planning, but in hosting the action plan itself, so that students can easily find these notes within the system that gives it context.

*"I use the Dashboard to update notes after the tutorial as I want to use the tutorial time listening to them and exploring issues/priorities"*

Participants were asked to give their recommendations for improving the Dashboard further, based on their needs in their current role. A large proportion of the tutors requested for further information such as attendance data to be included in the Dashboard system, and even for this particular measure to be included in the Engagement score. The inclusion of attendance data raises a complex issue, and is discussed in the next section of this report. Similarly, the addition of assessment data was also requested, as well as information about the wider student experience such as clubs, society, and volunteering participation. These are currently being reviewed for inclusion in future updates.

Increased or improved functionality was suggested, such as allowing students to make their own notes, more intuitive search functions, or signposting functions via the Dashboard itself. A further recommendation made by participants was for the Dashboard to be made more useful to staff in other areas of pastoral care, aside from 1-1 tutorials and the Library Learning and Teaching Team. Addressing these suggestions requires an assessment of what changes may be needed to enable this, a review of what the desired outcomes of the Dashboard are, and a wider consideration of how Dashboard functionality is currently communicated to staff. The latter point of communication links to recommendations made by staff relating to a need for further training and understanding of how to best use the Dashboard itself.

Finally, some recommendations made related to more fundamental questions about the Dashboard use, and the process of conducting tutorials; for example, does this process reach those students at the highest risk of withdrawal? Furthermore, some participants questioned whether using the Dashboard data in this type of intervention was indeed the role of the tutor; a view challenged by many others including ourselves.

### **3.3 Survey 3**

The main focus of the third and final survey was to understand staff views about the role of the Dashboard in tutorials and more broadly about the barriers to effective personal tutorials. This survey was conducted at the end of the trial period, allowing staff to reflect on the year as a whole.

Out of those that used the iPad during the year, 86% found it either 'useful' or 'very useful'. Several reasons were given for this including immediate access to information such as timetables, the flexibility to meet students, and specifically for access to the Dashboard. Interestingly, several staff reported using the iPad as part of teaching and presenting feedback. A follow up question found that almost half responded with either 4 or 5 out of 5 when asked to what extent the iPad made it easier to use the Dashboard (where 1 is 'not at all' and 5 is 'very much'). Participants who responded that the iPad had indeed had a positive impact on Dashboard usage were asked to give a reason for this. Responses generally fell under three themes; it made it easier to use the Dashboard, it increased the flexibility of the tutorial itself, and allowed for more effective note taking either during or after the session.

*"I have been able to meet students anywhere especially for informal tutorials and access information from dashboard and module learning rooms"*

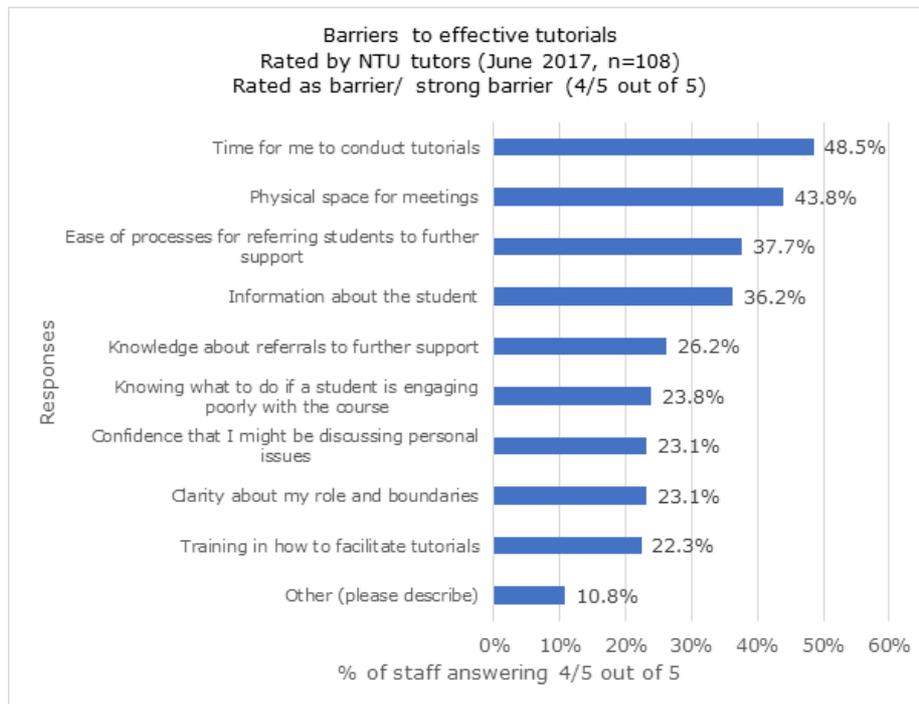
Respondents who felt that it had not made a significant impact on the way they delivered tutorials were also asked for their views. Reasons included issues with technology interfering in the personal approach of the tutor or the group session, concerns about the Dashboard, or lack of knowledge around how the tool can be used.

Overall, 58% of participants of this survey stated they felt the iPad ought to be made available for all staff to use in tutorials. A further question asked barriers still existed in delivering 1-1 or group tutorials, with a consideration for how the Dashboard could be developed as a tool in this context. These barriers are illustrated below in **figure 3**.

Via this survey, 40% of staff reported that they believed using the Dashboard in tutorials had led to changes in students' engagement. Reasons for this included challenging students' self-perceptions and how they felt they were performing in comparison to their peers, realising that the tutor had access to such information about them, and by using the Dashboard as an early warning system. Suggestions made by staff for their fellow tutors included using the notes, reflecting on modules that engaged students more readily, and to make greater use of the tools.

Overall, participants shared various views about the Dashboard, which included suggestions for improving the tool to further support students, and for more information to be made available to them. This reflects positive engagement from staff, most of whom found the Dashboard useful and wished to expand and develop the platform since using it via the iPads.

Figure 3: Barriers to effective tutorials as rated by NTU tutors:



#### 4. Lessons Learnt and Conclusions

An initial learning point when conducting this trial, was that it proved an unexpected challenge to 'give away' iPads. A process for distributing tablets was required within each school, which was then subsequently difficult to support once embedded. Reflecting on this with a consideration for existing models and frameworks for adopting learning analytics, may help us to understand the reasons behind these difficulties. A learning analytics tool, via the iPads, was provided for use in the existing process of 1-1 tutorials, and therefore this approach replicates an 'input model', such as those described by Bichsel (2012) or the Learning Analytics Readiness Instrument (LARI) (Arnold, Lonn, & Pistilli, 2014; Oster, Lonn, Pistilli, & Brown, 2016). As noted by Colvin et al., this approach is less likely to allow for the institution to plan and produce specific outputs, as the change (in this case, the introduction of the iPads) are 'grafted' onto existing structures or processes. This explains why some staff found the iPads more useful in other aspects of teaching, and the difficulty in embedding the change. In order to adjust for this issue, use of a 'Learning Analytics Output Model', such as the Learning Analytics Sophistication Model (Siemens, Dawson, & Lynch, 2013) may prove a more useful framework for embedding a change, as it focuses instead on the outcome rather than trying to adapt to existing processes.

Despite the concerns with adoption and varying effects, overall staff feedback suggests that a recommendation to provide further iPads to academic staff is appropriate, to enable them to carry out 1-1 tutorials with easy access to the Dashboard. Survey results consistently showed that the majority of staff found the iPads useful, not only in tutorial delivery, but also to enhance other aspects of teaching; which serves as an extra incentive for further iPad provision for staff.

Some caveats are needed however, specifically that:

1. this is partnered with effective training and user guides
2. there is a consideration for existing individual practice to understand where an iPad would not be effective
3. introduction of an iPad does not completely solve existing issues such as limited time and space
4. alternative tablets other than iPads are used where requested

Throughout the three surveys, there was a perception amongst some staff members that attendance as a measure is needed in order to have the most accurate 'engagement score', despite years of data demonstrating the relationship between engagement calculated via the existing algorithm and student success. Regardless of this evidence, attendance information has been included in more recent updates of the Dashboard, in order to provide staff with information as requested, and to gain more staff buy-in. There is however a consideration needed for not duplicating the function of other systems and processes designed to offer sophisticated analysis of student attendance.

This pilot study has helped us to better understand staff interaction with students, how staff have most effectively used the Dashboard to support students, where there are gaps in staff knowledge, and has informed the future direction of the Dashboard itself. This insight will be fed into future communications, training, and design of the Dashboard and its supporting materials going forward.

## **5. Contact Details**

For further information, please contact the following people:

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## **6. Appendices**

- Appendix A: Survey 1 full questions list
- Appendix B: Survey 2 full questions list
- Appendix C: Survey 3 full questions list

## 7. References

- Arnold, K. E., Lonn, S., & Pistilli, M. D. (2014). An exercise in institutional reflection: The learning analytics readiness instrument (LARI). *Proceedings of the 4<sup>th</sup> International Conference on Learning Analytics and Knowledge (LAK '14)*, 24–28 March 2014, Indianapolis, IN, USA. 163-167. New York: ACM.
- Bichsel, J. (2012). *Analytics in higher education: Benefits, barriers, progress and recommendations*. Louisville, CO: EDUCAUSE Center for Applied Research.
- Oster, M., Lonn, S., Pistilli, M. D., & Brown, M. G. (2016). The learning analytics readiness instrument. *Proceedings of the 6<sup>th</sup> International Conference on Learning Analytics and Knowledge (LAK '16)*, 25–29 April 2016, Edinburgh, UK. 173-182. New York: ACM.
- Siemens, G., Dawson, S., & Lynch, G. (2013). *Improving the quality and productivity of the higher education sector: Policy and strategy for systems-level deployment of learning analytics*. Sydney, Australia: Australian Government Office for Teaching and Learning.